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EXAMINER	
BONANTO, GEORGE P	
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/828,302	TAKI, YUJI	
	Examiner	Art Unit	
	George P. Bonanto	2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *07 February 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-17 and 21-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-17 and 21-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4/21/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 25 is objected to because of the following informalities: the phrase, "an reporting" is grammatically incorrect. The word "an" should be deleted and the word "a" should be inserted in its place. Furthermore, claim element, "the different kinds of air pressure report information" lacks antecedent basis. It appears the intended claim element is "the different kinds of air pressure state report information." Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 4, 5, 16, 17, 22-27, 38, and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,562,787 to Koch et al.

As to claim 1, Koch et al. disclose an air pressure state reporting apparatus comprising an air pressure state detection device that is provided on a wheel and that detects an air pressure of a tire of the wheel (pressure sensor 46; Fig. 2 and col. 4, lines 6-34) and compares a detected air pressure with a target value (condition limit; col. 2, lines 45-46) and a reporting device that generates report information indicative of an air pressure state based on the detected air pressure

by the air pressure state detection device (microchip 20 and antenna 30; Fig. 2 and col. 7, line 40 to col. 8, line 60) selects one of multiple reporting patterns which are different from each other in accordance with a difference between the detected air pressure and the target value (color coded visual display, audio signals and flashing lights; col. 2, lines 18-19 or coded signals that ultimately dictate which pattern will be used; col. 7, lines 45-46) and that reports the report information generated to outside a vehicle in a selected reporting pattern (col. 8, lines 53-60).

As to claim 2, Koch et al. further disclose that the reporting device includes a report information generating portion that generates the report information (col. 9, line 35 to col. 10, line 34) and a reporting portion that is operated to report the report information in the selected reporting pattern (col. 9, lines 15-35) and wherein the reporting portion includes at least one of a light radiation device that radiates light to outside the vehicle, a sound generating device that generates a sound to outside the vehicle and a portable instrument that is separate from the vehicle (col. 9, lines 15-35).

As to claim 4, Koch et al. further disclose that the reporting device includes a vehicle-mounted device that is provided in the vehicle and is operated in accordance with operation of an operating member by a driver (col. 9, lines 15-16 and lines 60-68) and an air pressure state-corresponding vehicle-mounted device control portion that generates the report information and operates the vehicle-mounted device in accordance with the report information generated (col. 9 line 15 to col. 10 line 34).

As to claim 5, Koch et al. further disclose that the reporting device includes a movable reporting device that has a movable member that is visually recognizable from outside the

vehicle, a driving portion that operates the movable member and a driving control portion that controls the driving portion (col. 9, lines 15-25).

As to claim 16, Koch et al. further disclose a wheel information transmitting portion that is provided on the wheel and that transmits wheel information that includes the state of the detected air pressure detected by the air pressure state detection device (antenna 30; Fig. 2) and a receiving portion that is provided on a vehicle body and that receives the wheel information (col. 9, lines 15-20) wherein the reporting device includes a received information-based air pressure state obtaining portion that obtains the state of air pressure based on the wheel information received by the receiving portion (col. 9, lines 15-35).

As to claim 17, Koch et al. further disclose that the reporting device is provided on the wheel (col. 4, lines 10-12).

As to claim 22, Koch et al. disclose an air pressure reporting method comprising a first step of detecting an air pressure of a tire of a wheel (col. 3, lines 43-45) a second step of comparing a detected air pressure of a tire with a target value (checking if condition limit has been exceeded; col. 2, lines 45-46) a third step of generating report information indicative of an air pressure state based on the detected air pressure (col. 3 lines 45-49) a fourth step of selecting one of multiple reporting patters which are different from each other in accordance with a difference between the detected air pressure and the target value (col. 2, lines 16-20) and a fifth step of reporting the report information generated to outside a vehicle (col. 3, lines 49-50 and col. 9, lines 15-35).

As to claim 23, Koch et al. disclose an air pressure state reporting apparatus comprising an air pressure state detection device that is provided on a wheel and that detects an air pressure

of a tire of the wheel (pressure sensor 46; Fig. 2 and col. 4, lines 6-34) and compares a detected air pressure with a target pressure (condition limit; col. 2, lines 45-46) which is variable (col. 10, lines 9-10) and a reporting device that generates report information indicative of an air pressure state based on a difference between the detected air pressure and the target value (microchip 20 and antenna 30; Fig. 2 and col. 7, line 40 to col. 8, line 60) and that reports the report information to outside a vehicle (col. 8, lines 53-60).

As to claim 24, Koch et al. further disclose that the reporting device includes a report information generating portion that generates the report information (col. 9, line 35 to col. 10, line 34) and a reporting portion that is operated in accordance with the report information generated by the report information generating portion (col. 9, lines 15-35) and wherein the reporting portion includes at least one of a light radiation device that generates light outside the vehicle, a sound generating device that generates a sound to outside the vehicle, and a portable instrument that is separate from the vehicle (col. 9, lines 15-35).

As to claim 25, Koch et al. further disclose that the reporting device includes an air pressure state information generating portion that generates different kinds of pieces of air pressure state report information in accordance with different states of the detected air pressure by the air pressure state detection device (col. 3, lines 40-60 and col. 9, lines 15-35) and a reporting portion capable of discriminatory reporting the different kinds of pieces of air pressure report information generated by the air pressure state information generating portion (col. 9, lines 15-35).

As to claim 26, Koch et al. further disclose that the reporting device includes a vehicle-mounted device that is provided in the vehicle and is operated in accordance with operation of an

operating member by a driver (col. 9, lines 15-16 and lines 60-68) and an air pressure state-corresponding vehicle-mounted device control portion that generates the report information and operates the vehicle-mounted device in accordance with the report information generated (col. 9 line 15 to col. 10 line 34).

As to claim 27, Koch et al. further disclose that the reporting device includes a movable reporting device that has a movable member that is visually recognizable from outside the vehicle, a driving portion that operates the movable member and a driving control portion that controls the driving portion (col. 9, lines 15-25).

As to claim 38, Koch et al. further disclose a wheel information transmitting portion that is provided on the wheel and that transmits wheel information that includes the state of air pressure detected by the air pressure state detection device (antenna 30; Fig. 2) and a receiving portion that is provided on a vehicle body and that receives the wheel information (col. 9, lines 15-20) wherein the reporting device includes a received information-based air pressure state obtaining portion that obtains the state of air pressure based on the wheel information received by the receiving portion (col. 9, lines 15-35).

As to claim 39, Koch et al. further disclose that the reporting device is provided on the wheel (col. 4, lines 10-12).

Claims 1, 2, 4, 6, 7, 9, 10, 14-17, 22-26, 28, 29, 31, 32, and 36-39 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,612,165 to Juzswik et al.

As to claim 1, Juzswik et al. disclose an air pressure state reporting apparatus comprising an air pressure state detection device that is provided on a wheel and that detects an air pressure of a tire of the wheel (pressure sensor 20, Fig. 1) and compares a detected air pressure with a

target value (col. 4, lines 58-64 and col. 5, lines 53-65) and a reporting device that generates report information indicative of an air pressure state based on the detected air pressure detected by the air pressure state detection device (controllers 26 and 36, antenna 34 and first and second indicators 48 and 50; Fig. 1) selects one of multiple reporting patterns which are different from each other in accordance with a difference between the detected air pressure and the target value (in-range signal, e.g. three short beeps and increment signal, e.g. one short beep; col. 6, lines 11-39) and that reports the report information generated to outside a vehicle (controllers 26 and 36, antenna 34 and first and second indicators 48 and 50; Fig. 1).

As to claim 2, Juzswik et al. further discloses that the reporting device includes a report information generating portion that generates the report information (pressure sensor 20; Fig. 1) and a reporting portion that is operated to report the report information in the selected reporting pattern (controllers 26 and 36 and second indicator 50; Fig. 1) and wherein the reporting portion includes at least one of a light radiating device that radiates a light to outside the vehicle and a sound generating device that generates a sound to outside the vehicle (col. 4 lines 50-57).

As to claim 4, Juzswik et al. further disclose that the reporting device includes a vehicle-mounted device that is provided in the vehicle and is operated in accordance with the operation of an operating member by a driver (vehicle based unit 16 and, for example, mode switch 52; Fig. 1) and an air pressure state-corresponding vehicle-mounted device control portion that generates the report information and operates the vehicle-mounted device in accordance with the report information generated (controller 36; Fig. 1).

As to claim 6, Juzswik et al. further disclose that the reporting device includes an air pressure supply state detection device that detects whether air pressure is being supplied to the

tire (steps 322-334 illustrate pressure sensor 20 and the controller 26 detecting that the tire is being supplied with air pressure; Fig. 3 and col. 9, lines 8-40) wherein the reporting device reports the report information while it is detected by the air pressure supply detection device that air pressure is being supplied (step 328; Fig. 3 and col. 9, lines 20-25).

As to claim 7, Juzswik et al. further disclose that the air pressure supply state detection device includes an increase gradient-corresponding air pressure supply state detecting portion that determines that air pressure is being supplied if the gradient of increase in the air pressure is greater than a set gradient (steps 318-326 illustrate pressure sensor 20 and controller 26 detecting that air pressure is being supplied if the air pressure changes more than x over the delay; Fig. 3 and col. 9, lines 5-40).

As to claim 9, Juzswik et al. further disclose that the air pressure supply state detection device includes a during-stop air pressure supply state detecting portion that determines that air pressure is being supplied if a gradient of increase in the air pressure is greater than a set gradient in a case where a rotation speed of the wheel that includes the tire is at most a set speed (col. 10, lines 14-19).

As to claim 10, Juzswik et al. further disclose that the reporting device includes an air pressure supply state reporting portion that generates air pressure supply state report information based on the state of the detected air pressure detected by the air pressure state detection device and reports that air pressure supply state report information if it is detected by the air pressure supply state detection device that air pressure is being supplied (air supply is detected based on air pressure sensed by pressure sensor 20 and report indicating air is being supplied is reported to the controller to initiate transmitting at step 328; Fig. 3 and col. 9, lines 17-21).

As to claim 14, Juzswik et al. further disclose that the reporting device includes an inside reporting portion that reports the report information to inside the vehicle during a normal condition (col. 5 lines 53-65) and an outside reporting portion that reports the report information to outside of the vehicle if it is detected by the air pressure supply state detection device that air pressure is being supplied (col. 6 lines 11-40).

As to claim 15, Juzswik et al. further disclose that if a standard state air pressure reaches a target value, the outside reporting portion reports so, and if the standard state air pressure is lower than a reference value the inside reporting portion reports so (no indication on single indicator perceived from outside if monitored pressure value is within predefined range, and alert condition indicated on single indicator if monitored pressure is outside of the predefined range; col. 4, lines 58-64 and col. 5, lines 53-65).

As to claim 16, Juzswik et al. further disclose a wheel information transmitting portion that is provided on the wheel and that transmits wheel information that includes the state of air pressure detected by the air pressure state detection device (antenna 34; Fig. 1) and a receiving portion that is provided on a vehicle body and that receives the wheel information (antenna 46; Fig. 1) wherein the reporting device includes a received information-based air pressure state obtaining portion that obtains the state of air pressure based on the wheel information received by the receiving portion (controller 36; Fig. 1).

As to claim 17, Juzswik et al. further disclose that the reporting device is provided on the wheel (col. 3, lines 19-23).

As to claim 22, Juzswik et al. disclose an air pressure reporting method comprising a first step of detecting a state of air pressure of a tire of a wheel (col. 5, lines 53-65) a second step of

comparing a detected air pressure of the tire with a target value (col. 5, lines 53-65) a third step of generating report information indicative of an air pressure state based on the detected air pressure (col. 5, lines 53-65) a fourth step of selecting one of multiple reporting patterns which are different from each other in accordance with a difference between the detected air pressure and the target value (in-range signal, e.g. three short beeps and increment signal, e.g. one short beep; col. 6, lines 11-39) and a fifth step of reporting the report information generated to outside a vehicle (col. 4, lines 58-64 and col. 5, lines 53-65).

As to claim 23, Juzswik et al. disclose an air pressure state reporting apparatus comprising an air pressure state detection device that is provided on a wheel and that detects a state of air pressure of a tire of the wheel (pressure sensor 20, Fig. 1) and compares a detected air pressure with a target value (col. 5, lines 53-65) which is variable (either changing the predetermined range by user, or the system resets threshold pressure value while in the gauge mode; Fig. 3, step 320) and a reporting device that generates report information indicative of an air pressure state based on the state of air pressure detected by the air pressure state detection device and that reports the report information generated to outside a vehicle (controllers 26 and 36, antenna 34 and first and second indicators 48 and 50; Fig. 1).

As to claim 24, Juzswik et al. further discloses that the reporting device includes a report information generating portion that generates the report information (pressure sensor 20; Fig. 1) and a reporting portion that is operated in accordance with the report information generated by the report information generating portion (controllers 26 and 36 and second indicator 50; Fig. 1) and wherein the reporting portion includes at least one of a light radiating device that radiates a

light to outside the vehicle and a sound generating device that generates a sound to outside the vehicle (col. 4 lines 50-57).

As to claim 25, Juzswik et al. further disclose that the reporting device includes an air pressure state information generation generating portion that generates different kinds of pieces of air pressure state report information in accordance with different states of air pressure detected by the air pressure state detection device (pressure sensor 20 and controller 26; Fig. 1) and a reporting portion capable of discriminatory reporting of the different kinds of pieces of air pressure report information generated by the air pressure state information generating portion (controller 36 and display 48; Fig. 1).

As to claim 26, Juzswik et al. further disclose that the reporting device includes a vehicle-mounted device that is provided in the vehicle and is operated in accordance with the operation of an operating member by a driver (vehicle based unit 16 and, for example, mode switch 52; Fig. 1) and an air pressure state-corresponding vehicle-mounted device control portion that generates the report information and operates the vehicle-mounted device in accordance with the report information generated (controller 36; Fig. 1).

As to claim 28, Juzswik et al. further disclose that the reporting device includes an air pressure supply state detection device that detects whether air pressure is being supplied to the tire (steps 322-334 illustrate pressure sensor 20 and the controller 26 detecting that the tire is being supplied with air pressure; Fig. 3 and col. 9, lines 8-40) wherein the reporting device reports the report information while it is detected by the air pressure supply detection device that air pressure is being supplied (step 328; Fig. 3 and col. 9, lines 20-25).

As to claim 29, Juzswik et al. further disclose that the air pressure supply state detection device includes an increase gradient-corresponding air pressure supply state detecting portion that determines that air pressure is being supplied if the gradient of increase in the air pressure is greater than a set gradient (steps 318-326 illustrate pressure sensor 20 and controller 26 detecting that air pressure is being supplied if the air pressure changes more than x over the delay; Fig. 3 and col. 9, lines 5-40).

As to claim 31, Juzswik et al. further disclose that the air pressure supply state detection device includes a during-stop air pressure supply state detecting portion that determines that air pressure is being supplied if a gradient of increase in the air pressure is greater than a set gradient in a case where a rotation speed of the wheel that includes the tire is at most a set speed (col. 10, lines 14-19).

As to claim 32, Juzswik et al. further disclose that the reporting device includes an air pressure supply state reporting portion that generates air pressure supply state report information based on the state of air pressure detected by the air pressure state detection device and reports that air pressure supply state report information if it is detected by the air pressure supply state detection device that air pressure is being supplied (air supply is detected based on air pressure sensed by pressure sensor 20 and report indicating air is being supplied is reported to the controller to initiate transmitting at step 328; Fig. 3 and col. 9, lines 17-21).

As to claim 36, Juzswik et al. further disclose that the reporting device includes an inside reporting portion that reports the report information to inside the vehicle during a normal condition (col. 5 lines 53-65) and an outside reporting portion that reports the report information

to outside of the vehicle if it is detected by the air pressure supply state detection device that air pressure is being supplied (col. 6 lines 11-40).

As to claim 37, Juzswik et al. further disclose that if the standard state air pressure reaches a target value, the outside reporting portion reports so, and if the standard state air pressure is lower than a reference value the inside reporting portion reports so (no indication on single indicator perceived from outside if monitored pressure value is within predefined range, and alert condition indicated on single indicator if monitored pressure is outside of the predefined range; col. 4, lines 58-64 and col. 5, lines 53-65).

As to claim 38, Juzswik et al. further disclose a wheel information transmitting portion that is provided on the wheel and that transmits wheel information that includes the state of air pressure detected by the air pressure state detection device (antenna 34; Fig. 1) and a receiving portion that is provided on a vehicle body and that receives the wheel information (antenna 46; Fig. 1) wherein the reporting device includes a received information-based air pressure state obtaining portion that obtains the state of air pressure based on the wheel information received by the receiving portion (controller 36; Fig. 1).

As to claim 39, Juzswik et al. further disclose that the reporting device is provided on the wheel (col. 3, lines 19-23).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 8, 11, 13, 21, 30, 33, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,612,165 to Juzswik et al., as applied to claims 1, 6, 23, and 28 above, in view of Published U.S. Application No. 2004/0017289 by Brown, Jr.

As to claim 8, Juzswik et al. fail to disclose that the reporting device includes an abnormality reporting portion that reports that a gradient of increase in the air pressure is at most an abnormality detection-purpose set gradient if the gradient of increase in the air pressure is at most the abnormality detection-purpose set gradient in a case where it is detected by the air pressure supply state detection device that air pressure is being supplied.

Brown, Jr. discloses an abnormality reporting portion that reports that a gradient of change in the air pressure is at most an abnormality detection-purpose set gradient if the gradient of change in the air pressure is at most the abnormality detection-purpose set gradient (paragraphs 12, 13, and 101-104).

It would have been obvious to one of ordinary skill in the art to modify the air pressure state reporting apparatus of Juzswik et al. by adding the abnormality reporting portion of Brown, Jr. in order to provide advance warning to the driver so as to enable preventative action (Brown, Jr.; paragraph 12).

As to claim 11, Juzswik et al. disclose a tire temperature-related information obtainment device that is provided on at least one of the wheel and a vehicle body (other sensor 22 may be a temperature sensor; Fig. 1 and col. 3, lines 26-27) and that obtains tire temperature-related information that is information related to a temperature of the tire (col. 3, lines 26-27) and a set pressure attainment reporting portion that reports that the air pressure of the tire obtained by the air pressure obtaining portion is at least a set pressure if the air pressure of the tire is at least a set

pressure (col. 5, lines 53-65). Juzswik et al. fail, however, to disclose that the reporting device includes a standard state air pressure obtaining portion that obtains the air pressure of the tire in a standard state based on the tire temperature-related information obtained by the tire temperature-related information obtainment device and the state of air pressure detected by the air pressure state detection device, and a set pressure attainment information reporting portion that reports that the air pressure of the tire in the standard state obtained by the standard state air pressure obtaining is at least a set pressure if the air pressure of the tire in the standard state obtained by the standard state air pressure obtaining portion is at least the set pressure.

Brown, Jr. discloses a tire temperature-related information obtainment device that is provided on at least one of the wheel and the vehicle body and that obtains tire temperature-related information that is information related to a temperature of the tire (Figs. 8a and 8b and paragraph 83) wherein the reporting device includes a standard state air pressure obtaining portion that obtains the air pressure of the tire in a standard state based on the tire temperature-related information obtained by the tire temperature-related information obtainment device and the state of air pressure detected by the air pressure state detection device (Figs. 8a and 8b and paragraph 83) and a set pressure attainment information reporting portion that reports that the air pressure of the tire in the standard state obtained by the standard state air pressure obtaining portion is at least a set pressure if the air pressure of the tire in the standard state obtained by the standard state air pressure obtaining portion is at least the set pressure (Figs. 8a and 8b and paragraph 84).

It would have been obvious to one of ordinary skill in the art to modify the air pressure state reporting apparatus of Juzswik et al. by including the standard state air pressure obtaining

portion of Brown, Jr. in order to improve the accuracy of the information communicated to a driver regarding tire pressure (Brown, Jr.; paragraph 5).

As to claim 13, Brown, Jr. further discloses that the standard state air pressure obtaining portion includes a high temperature-time obtaining portion that obtains the standard state air pressure if the tire temperature indicated by the tire temperature-related information obtained by the tire temperature-related information obtainment device is at least a set temperature (paragraph 83).

As to claim 21, Juzswik et al. fails to disclose a standard state air pressure value obtaining portion that obtains a standard state air pressure value based on an air pressure value detected by the air pressure state detection device and at least one of a load applied to the wheel and a temperature of the tire.

Brown, Jr. discloses a standard state air pressure value obtaining portion that obtains a standard state air pressure value based on an air pressure value detected by the air pressure state detection device and at least one of a load applied to the wheel and a temperature of the tire (Figs. 8a and 8b and paragraph 83).

It would have been obvious to one of ordinary skill in the art to modify the air pressure state reporting apparatus of Juzswik et al. by including the standard state air pressure obtaining portion of Brown, Jr. in order to improve the accuracy of the information communicated to a driver regarding tire pressure (Brown, Jr.; paragraph 5).

As to claim 30, Juzswik et al. fail to disclose that the reporting device includes an abnormality reporting portion that reports that a gradient of increase in the air pressure is at most an abnormality detection-purpose set gradient if the gradient of increase in the air pressure is at

most the abnormality detection-purpose set gradient in a case where it is detected by the air pressure supply state detection device that air pressure is being supplied.

Brown, Jr. discloses an abnormality reporting portion that reports that a gradient of change in the air pressure is at most an abnormality detection-purpose set gradient if the gradient of change in the air pressure is at most the abnormality detection-purpose set gradient (paragraphs 12, 13, and 101-104).

It would have been obvious to one of ordinary skill in the art to modify the air pressure state reporting apparatus of Juzswik et al. by adding the abnormality reporting portion of Brown, Jr. in order to provide advance warning to the driver so as to enable preventative action (Brown, Jr.; paragraph 12).

As to claim 33, Juzswik et al. disclose a tire temperature-related information obtainment device that is provided on at least one of the wheel and a vehicle body (other sensor 22 may be a temperature sensor; Fig. 1 and col. 3, lines 26-27) and that obtains tire temperature-related information that is information related to a temperature of the tire (col. 3, lines 26-27) and a set pressure attainment reporting portion that reports that the air pressure of the tire obtained by the air pressure obtaining portion is at least a set pressure if the air pressure of the tire is at least a set pressure (col. 5, lines 53-65). Juzswik et al. fail, however, to disclose that the reporting device includes a standard state air pressure obtaining portion that obtains the air pressure of the tire in a standard state based on the tire temperature-related information obtained by the tire temperature-related information obtainment device and the state of air pressure detected by the air pressure state detection device, and a set pressure attainment information reporting portion that reports that the air pressure of the tire in the standard state obtained by the standard state air pressure

obtaining is at least a set pressure if the air pressure of the tire in the standard state obtained by the standard state air pressure obtaining portion is at least the set pressure.

Brown, Jr. discloses a tire temperature-related information obtainment device that is provided on at least one of the wheel and the vehicle body and that obtains tire temperature-related information that is information related to a temperature of the tire (Figs. 8a and 8b and paragraph 83) wherein the reporting device includes a standard state air pressure obtaining portion that obtains the air pressure of the tire in a standard state based on the tire temperature-related information obtained by the tire temperature-related information obtainment device and the state of air pressure detected by the air pressure state detection device (Figs. 8a and 8b and paragraph 83) and a set pressure attainment information reporting portion that reports that the air pressure of the tire in the standard state obtained by the standard state air pressure obtaining portion is at least a set pressure if the air pressure of the tire in the standard state obtained by the standard state air pressure obtaining portion is at least the set pressure (Figs. 8a and 8b and paragraph 84).

It would have been obvious to one of ordinary skill in the art to modify the air pressure state reporting apparatus of Juzswik et al. by including the standard state air pressure obtaining portion of Brown, Jr. in order to improve the accuracy of the information communicated to a driver regarding tire pressure (Brown, Jr.; paragraph 5).

As to claim 35, Brown, Jr. further discloses that the standard state air pressure obtaining portion includes a high temperature-time obtaining portion that obtains the standard state air pressure if the tire temperature indicated by the tire temperature-related information obtained by

the tire temperature-related information obtainment device is at least a set temperature (paragraph 83).

Claims 12 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,612,165 to Juzswik et al. in view of Published U.S. Application No. 2004/0017289 by Brown, Jr., as applied to claims 11 and 33 above, in further view of Published U.S. Application No. 2005/0162263 by Fennel et al.

As to claims 12 and 34, Juzswik et al. and Brown, Jr. fail to disclose that the tire temperature-related information obtainment device includes a rotation state detection device that detects a state of rotation of the wheel, and the reporting device includes a rotation state-corresponding temperature estimating portion that estimates a temperature of the tire based on the state of rotation detected by the rotation state detection device.

Fennel et al. disclose a tire temperature-related information obtainment device that includes a rotation state detection device that detects a state of rotation of the wheel, and a reporting device that includes a rotation state-corresponding temperature estimating portion that estimates a temperature of the tire based on the state of rotation detected by the rotation state detection device (paragraph 19).

It would have been obvious to one of ordinary skill in the art to modify the air pressure state reporting apparatus of Juzswik et al, including the standard state air pressure obtaining portion of Brown, Jr., by including the rotation state detection device of Fennel et al. and using the estimated temperature based on the rotation state in the calculation of the standard state air pressure in order to eliminate any errors in the temperature reading by direct measurement due to excess heat from the road surface or brake systems (Fennel et al.; abstract).

Response to Arguments

Applicant's arguments filed 7 February 2006 have been fully considered but they are not persuasive.

In response to the rejection of claims 1-5, 16, 17, and 22, Applicant argues, at page 18, that Koch et al. fail to disclose a reporting device that selects one of multiple reporting patterns which are different from each other in accordance with a difference between the detected air pressure and a target value, and reports the information generated to outside a vehicle in a selected reporting pattern. This argument is not persuasive because, as described above, Koch et al. disclose various reporting patterns, for example color-coded lights, in accordance with different pressure states, and the system reports the different states using the color coded lights.

Applicant further argues, at page 19, that Koch et al. fail to disclose comparing a detected air pressure with a variable target value. This argument is not persuasive because, as described above, Koch et al. disclose that the sensor threshold is variable, e.g. by user reprogramming.

In response to the rejection of claims 1-7, 9, 10, 14-17, 19, and 22, Applicant argues, at page 19, that Juzswik et al. fail to disclose multiple reporting patterns. This argument is not persuasive because, as described above, Juzswik et al. disclose at least two different patterns of audible beeps used to distinguish between different tire pressure states.

Applicant further argues, at page 20, that Juzswik et al. fail to disclose a variable target value. This argument is not persuasive because, as described above, Juzswik et al. disclose that the predefined range is variable, e.g. by user reprogramming, and further describe a pressure threshold used for comparison that is automatically variable, e.g. when the user is filling the tire with air.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 5,517,853 and Published U.S. Application No. 2002/0024432 disclose similar tire pressure monitoring systems.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George P. Bonanto whose telephone number is (571) 272-2182. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GPB
13 March 2006

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